

13. ABNORMAL CELLS BUILT BY THE WASP *EUMENES ESURIENS* FABR. (?): VESPOIDEA*(With a plate)*

The commonest species of domestic mason wasp in New Capital, Bhubaneswar, is the little yellow, orange, black, and coral *Eumenes esuriens* Fabr. These wasps begin building their circular mud cells by laying down two brackets of mud. These brackets may both be laid on the same surface, but they are usually laid extending from a horizontal surface on to another surface at an angle to the first. The cells are thus commonly found in corners and chinks of masonry, and on door and window frames, rather than on walls. We have yet to find a nest not on a human artifact. Further loads are added to these two brackets extending them lengthways and raising their height. Usually a third bracket is added early in the process. These brackets are finally joined, the circular rim thus made is added to and thus reduced in circumference. The final one, or two, loads are bent outwards to make the well-known lip which acts as a funnel for introducing the prey, and the material of which is re-worked forming part of the lid when the cell is sealed. The number of loads used in such a construction ranges between 12 and 21, depending partly on the site and partly on the idiosyncrasy of a given wasp. Usually several cells are built overlapping one another, and then the whole construction is covered over with mud, partly as rough-cast, partly as vaulting. Of course a nest may be deserted at any stage. (A statistical analysis of nest building in this species is in preparation.)

If the almost inescapable comparison is made between these cells and a spherical water pot, it can be said that the wasps construct the upper part of a pot—say a third to a half—consisting of the shoulders, a barely distinct neck, and a lip. The lower edge of the shoulders is irregular in shape, fitting, and joined to, the substrate. One diameter is about 17 mm. and the other about 15 mm. There is some variation in size. However some species of *Eumenes*, for example the Indian *E. affinissima* (see Dutt 1913) and the European *E. dubius* and *E. pedunculatus* build cells which are complete spherical pots. The process is shown in the magnificent photographs of Olberg (1959, pp. 122-130). The wasps of these species lay down small flat plates of mud, rather narrowly attached to plants, extend them in diameter, curl up the edges into a saucer, then into a bowl, and finally into a narrow-mouthed pot with a typical lip.

Exceptional pots of wasp *Eumenes esuriens* (?)



1. View from above



2. View from below

Entire pot on right above and left below

